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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,557	04/26/2001	Tsugunao Kobayashi	7217/64326	9258

7590 08/16/2005
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EXAMINER

RYMAN, DANIEL J

ART UNIT PAPER NUMBER

2665

DATE MAILED: 08/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/843,557

Applicant(s)

KOBAYASHI, TSUGUNAO

Examiner

Daniel J. Ryman

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/26/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/26/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2665

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: on page 13, lines 4 and 14 “condition ,a data” should be “condition, a data” and on page 15, line 11 “base station 101 and the terminal 102” should be “base station 1 and the terminal 2”.

Appropriate correction is required.

Drawings

2. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Taketsugu et al. (USPN 5,740,167).

Art Unit: 2665

5. Regarding claim 1, Applicant admits as prior art a base station apparatus for performing wireless communication with one of a plurality of terminal apparatuses using a contention-based communication system, comprising: idle signal transmission means for transmitting an idle signal notifying said terminal apparatus that a communication channel is available (page 1, line 11-page 7, line 10); and a first contention-based communication system (ISMA) in which each of said plurality of terminal apparatuses transmits a data packet according to said idle signal without transmitting a control packet and a second contention-based communication system (R-ISMA) which each of said plurality of terminal apparatuses transmits a reservation packet according to said idle signal to ensure a communication channel and then transmits said data packet (page 1, line 11-page 7, line 10) where each contention-based communication system has benefits and shortcomings (page 7, lines 1-10).

Applicant does not admits as prior art a system selection means for choosing between the first contention-based communication system and the second contention-based communication system, wherein said system selection means chooses between said first contention-based communication system and said second contention-based communication system according to a communication state; and said idle signal transmission means transmits said idle signal including system specification information for specifying said communication system selected by said selection means to said terminal apparatus. Taketsugu teaches, in a wireless communication system that transmits idle signals (col. 3, line 44-50), using a system selection means for choosing between a first communication system (contention) and a second communication system (polling) (col. 1, lines 48-61 and col. 4, lines 47-50), wherein said system selection means chooses between said first contention-based communication system and said second

Art Unit: 2665

contention-based communication system according to a communication state (col. 1, lines 48-61 and col. 4, lines 47-50); and said idle signal transmission means transmits said idle signal including system specification information for specifying said communication system selected by said selection means to said terminal apparatus (col. 6, lines 11-15). Taketsugu's system "overcome[s] the prior art shortcomings by combining the benefits of [the two communication systems]." (col. 1, lines 48-51). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a system selection means for choosing between the first contention-based communication system and the second contention-based communication system, wherein said system selection means chooses between said first contention-based communication system and said second contention-based communication system according to a communication state; and said idle signal transmission means transmits said idle signal including system specification information for specifying said communication system selected by said selection means to said terminal apparatus in order to overcome the prior art shortcomings by combining the benefits of the two communication systems.

6. Regarding claim 2, Applicant in view of Taketsugu discloses that the system selection means chooses said communication system according to a transmission line quality (Taketsugu: col. 1, lines 48-61 and col. 4, lines 47-50).

7. Regarding claim 3, Applicant in view of Taketsugu suggests that the system selection, means chooses said communication system according to a traffic state on a transmission line (Taketsugu: col. 1, lines 25-30; col. 1, lines 36-40; and col. 6, lines 48-55).

8. Regarding claim 4, Applicant in view of Taketsugu discloses that the system selection means performs one of choosing between said first contention-based communication system and

Art Unit: 2665

said second contention-based communication system (Taketsugu: col. 1, lines 48-61 and col. 4, lines 47-50) and leaving no communication system selected according to said communication state (reselect command) (col. 7, lines 12-20); and said idle signal transmission means transmits said idle signal including system specification information specifying one of said communication system selected by said selection means (col. 6, lines 11-15). Applicant in view of Taketsugu does not expressly disclose that the idle signal includes specification information including that no communication system has been selected to said terminal apparatus; however, Applicant in view of Taketsugu does disclose transmitting information that no communication system has been selected (col. 7, lines 12-20) and using the idle signal to transmit system information (col. 6, lines 11-15). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the idle signal include specification information including that no communication system has been selected to said terminal apparatus since the idle signal is used to transmit other system information.

9. Regarding claim 5, Applicant in view of Taketsugu discloses that when said reservation packet is received from said terminal apparatus polling signal transmission means are provided for transmitting a polling signal including terminal identification information for specifying said terminal apparatus to each of said plurality of terminal apparatuses (Applicant: page 1, line 11- page 7, line 10 and Taketsugu: col. 6, lines 11-15).

10. Regarding claim 6, Applicant discloses a terminal apparatus for performing wireless communication with a base station apparatus using a contention-based communication system, comprising: idle signal reception means for receiving an idle signal notifying that a communication channel transmitted from said base station apparatus is available (page 1, line 11-

Art Unit: 2665

page 7, line 10); and a first contention-based communication system (ISMA) that transmits a data packet to said base station apparatus according to said idle signal without transmitting a control packet (page 1, line 11-page 7, line 10) and a second contention-based communication system (R-ISMA) that transmits a reservation packet according to said idle signal to ensure a communication channel and then transmits said data packet to said base station apparatus (page 1, line 11-page 7, line 10) where each contention-based communication system has benefits and shortcomings (page 7, lines 1-10); transmission means for transmitting said data packet to said base station apparatus according to said reception of said idle signal (page 1, line 11-page 7, line 10) and transmission means for transmitting to said base station apparatus said reservation packet including terminal identification information according to said reception of said idle signal (page 1, line 11-page 7, line 10).

Applicant does not expressly disclose system determination means for determining a data packet communication system to be one of a first contention-based communication system and a second contention-based communication system; transmission means for transmitting said data packet to said base station apparatus according to the first contention-based system when said system determination means determines said first contention-based communication system and for transmitting to said base station apparatus according to the second contention-based system when said system determination means determines said second contention-based communication system, wherein said idle signal includes system selection information for choosing between said first contention-based communication system and said second contention-based communication system; and said system determination means determines said communication system according to said system selection information and a communication state. Taketsugu teaches, in a wireless

Art Unit: 2665

communication system that transmits idle signals (col. 3, line 44-50), using system determination means for determining a data packet communication system to be one of a first communication system (contention) and a second communication system (polling) (col. 1, lines 48-61 and col. 4, lines 47-50); transmission means for transmitting said data packet to said base station apparatus according to the first system when said system determination means determines said first system and for transmitting to said base station apparatus according to the second system when said system determination means determines said second system (col. 4, lines 47-50 and col. 6, lines 11-15), wherein said idle signal includes system selection information for choosing between said first communication system and said second communication system (col. 6, lines 11-15); and said system determination means determines said communication system according to said system selection information and a communication state (col. 1, lines 48-61 and col. 4, lines 47-50). Taketsugu's system "overcome[s] the prior art shortcomings by combining the benefits of [the two communication systems]." (col. 1, lines 48-51). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have system determination means for determining a data packet communication system to be one of a first contention-based communication system and a second contention-based communication system; transmission means for transmitting said data packet to said base station apparatus according to the first contention-based system when said system determination means determines said first contention-based communication system and for transmitting to said base station apparatus according to the second contention-based system when said system determination means determines said second contention-based communication system, wherein said idle signal includes system selection information for choosing between said first contention-based

Art Unit: 2665

communication system and said second contention-based communication system; and said system determination means determines said communication system according to said system selection information and a communication state in order to overcome the prior art shortcomings by combining the benefits of the two communication systems.

11. Regarding claim 7, Applicant in view of Taketsugu suggests that the system determination means selects said communication system according to said system selection information and a length of said data packet to be transmitted (Applicant: page 1, line 11-page 7, line 10 and Taketsugu: col. 4, lines 47-50 and col. 6, lines 11-15). Applicant in view of Taketsugu discloses selecting a communication system depending on system characteristics (Taketsugu: col. 4, lines 47-50 and col. 6, lines 11-15). Applicant in view of Taketsugu also discloses that R-ISMA performs better when short packets are employed compared to ISMA (Applicant: page 7, lines 1-10). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to select the communication system according to a length of said data packet to be transmitted in order to ensure that the packets are efficiently transmitted.

12. Regarding claim 8, Applicant in view of Taketsugu suggests that the system determination means selects said communication system according to said system selection information and a number of retransmissions for said data packet to be transmitted (Applicant: page 1, line 11-page 7, line 10 and Taketsugu: col. 4, lines 47-50; col. 6, lines 11-15; and col. 6, lines 48-55). Applicant in view of Taketsugu discloses selecting a communication system depending on system characteristics (Taketsugu: col. 4, lines 47-50 and col. 6, lines 11-15). Applicant in view of Taketsugu also discloses that the amount of retransmissions impacts system performance (Taketsugu: col. 6, lines 48-55). Thus, it would have been obvious to one of

Art Unit: 2665

ordinary skill in the art at the time of the invention to select the communication system according to a number of retransmissions for said data packet to be transmitted in order to ensure that the packets are efficiently transmitted.

13. Regarding claim 9, Applicant in view of Taketsugu discloses that the transmission means transmits said data packet according to a reception of a polling signal when said polling signal received after said reservation packet transmission contains terminal specification information (Applicant: page 1, line 11-page 7, line 10 and Taketsugu: col. 6, lines 11-15).

14. Regarding claims 10 and 18, incorporating the rejection of claims 1 and 6, Applicant in view of Taketsugu discloses all of the limitations of claims 10 and 18, as outlined in the rejection of claims 1 and 6.

15. Regarding claims 11 and 19, incorporating the rejection of claim 2, Applicant in view of Taketsugu discloses all of the limitations of claims 11 and 19, as outlined in the rejection of claim 2.

16. Regarding claims 12 and 20, incorporating the rejection of claim 3, Applicant in view of Taketsugu discloses all of the limitations of claims 12 and 20, as outlined in the rejection of claim 3.

17. Regarding claims 13 and 21, incorporating the rejection of claim 7, Applicant in view of Taketsugu discloses all of the limitations of claims 13 and 21, as outlined in the rejection of claim 7.

18. Regarding claims 14 and 22, incorporating the rejection of claim 8, Applicant in view of Taketsugu discloses all of the limitations of claims 14 and 22, as outlined in the rejection of claim 8.

19. Regarding claims 15 and 23, incorporating the rejection of claim 4, Applicant in view of Taketsugu discloses all of the limitations of claims 15 and 23, as outlined in the rejection of claim 4.

20. Regarding claims 16 and 24, incorporating the rejection of claim 5, Applicant in view of Taketsugu discloses all of the limitations of claims 16 and 24, as outlined in the rejection of claim 5.

21. Regarding claims 17 and 25, incorporating the rejection of claim 9, Applicant in view of Taketsugu discloses all of the limitations of claims 17 and 25, as outlined in the rejection of claim 9.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 7:00-4:30 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/843,557

Page 11

Art Unit: 2665

DDZ

Daniel J. Ryman
Examiner
Art Unit 2665



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